# Day 4: Normal Distribution #2

## HackerRank

### Objective

In this challenge, we practice solving problems with normally distributed variables.

### Task

In a certain plant, the time taken to assemble a car is a random variable having a normal distribution with a mean of 20 hours and a standard deviation of 2 hours. What is the probability that a car can be assembled at this plant in:

- 1. Less than 19.5 hours?
- 2. Between  ${\bf 20}$  and  ${\bf 22}$  hours?

#### **Output Format**

Your output must be a floating point/decimal number, correct to a scale of 3 decimal places. You can submit solutions in either of the 2 following ways:

- 1. Solve the problem manually and submit your result as *Plain Text*. In the text box below, enter 2 lines of floating point/decimal numbers.
- 2. Submit an *R* or *Python* program, which uses the above parameters (hard-coded), and computes the answer.

Your answer should resemble something like:

0.123 0.456

(This is **NOT** the answer, just a demonstration of the answering format.)